UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,450	07/21/2003	Hideki Saga	29284/592	5239

23838 7590 04/16/2007

KENYON & KENYON LLP
1500 K STREET N.W.
SUITE 700
WASHINGTON, DC 20005

EXAMINER	
CHU, KIM KWOK	
ART UNIT	**PAPER NUMBER**
2627	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/622,450	SAGA, HIDEKI	
	Examiner	Art Unit	
	Kim-Kwok CHU	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 1/12/2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,8,10 and 12-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,8,10 and 12-16* is/are rejected.

7)☒ Claim(s) *17-32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *7/21/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/583,480.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Remarks

1. Applicant's Remarks filed on January 22, 2007 have been fully considered but it is not persuasive. Applicant states that the prior art of Toda (U.S. Patent 5,642,343) fails to teach a change in control operation of the position control means between the first reproduction and the second reproduction as required by Claim 1 (page 13 of the Remarks, last three lines to page 14 of the Remarks, first line). For example, Applicant argues that there is no change in the control operation of the trial writing unit between V1 (most dense pattern center level) and V2 (most coarse pattern center level) as illustrated in Toda's Fig. 20 (page 13 of the Remarks, last paragraph, lines 3-5). Accordingly, in the prior art of Toda's test reproducing operations as illustrated in Fig. 20, step 2011, the detection of most dense pattern center level V1 and most coarse pattern center level V2 is illustrated in Fig. 5. In order to obtain the signal V1 and V2, the tracking servo control moves the optical head along the recording track so that a string of recording marks can be read (Fig. 5). In other words, during the reproduction of the test pattern consisting of dense and coarse marks, the prior art of Toda's control means such as a tracking servo is moved/changed so that it can access the dense and coarse marks.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> *A person shall be entitled to a patent unless --*
> *(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

3. Claims 1, 8, 10 and 12-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Toda et al. (U.S. Patent 5,642,343).

Toda teaches an information recording apparatus for recording information on a recording medium having all the elements and means as recited in claims 1, 8 and 10. For example, Toda teaches the following:

(a) With respect to Claim 1, the information recording apparatus for recording information on a recording medium 101 by forming marks different in a physical property from non-recorded portions (test areas) with energy injected into the recording medium 101 (Figs. 1 and 5; different size of marks are formed in a test track; column 6, lines 37-40); energy generation means 8 (laser in optical head 2) which generates recording energy (Fig. 1); position control means (in optical pickup 2) which controls an injection position of the recording energy output from the energy generation means 8 for

the recording medium 101 (Figs. 1 and 27; focusing and tracking controls are inherent features in the pickup 2); drive means 7 which drives the energy generation means 8 (Fig. 1); a switching means (in encoder 4) which selectively switches information based on user's data or test information to be supplied to the drive means (Fig. 1; input of the encoder 4 is a switching means so that either input data or trial writing data is selected to encoded); a reading means 10 which reads marks recorded on the recording medium 101 (Fig. 1; signals are read by the reproducing amplifier); an evaluation means 16 which evaluates a reproduced signal amplitude obtained from the reading means 10 (Fig. 1); a recording condition control means 6, 11, 13 which controls a recording condition of an evaluation result obtained from the evaluation means 16 (Figs. 1 and 2; steps 2023, 2026 and 2027); in a case of reproducing the marks having the test information (Fig. 2, step 2026), a control operation of the position control means is unchanged in a first reproduction in comparison with a time when the test information is recorded (Figs. 1 and 2; test recording signals are recorded and then reproduced without involving track jumping operation); a control operation (tracking) of the position control means is changed in a second reproduction in comparison with a time when the test information is recorded (Fig. 5; control means

such as a tracking servo is moved forward so that it can access the dense and coarse marks); the recording condition is controlled in accordance with values of a signal amplitude (light intensity) in the first reproduction and a signal amplitude in the second reproduction (Figs. 2 and 5; light intensities to form marks are determined after repeated test recording).

(b) With respect to Claim 8, a vibration means (servo focusing) which vibrates (up and down motions) the reading means in a direction perpendicular to a main scanning direction on the recording medium (Fig. 1; the inherent servo focusing means which moves the objective lens in an upward and downward directions).

(c) With respect to Claim 10, in a case where the test information is supplied to the drive means 7 and recorded on the recording medium 101, pieces of the test information, each of which is different, are recorded on a plurality of tracks/locations (Fig. 1; test trial writing is performs on a plurality of test track/zone).

4. Method Claim 12 is drawn to the method of using the corresponding apparatus claimed in claim 1. Therefore method claim 12 corresponds to apparatus claim 1 and is rejected for the same reasons of anticipation as used above.

5. Method Claim 13 depends on method Claim 12 and therefore also drawn to the method of using the corresponding apparatus claimed in claim 1. Claim 13 however also recites the following limitation which is also taught by the prior art of Toda:

(a) with respect to Claim 13, in the first and second reproduction steps, either a stop or a start of a tracking offset amount, of a tracking polarity, or of a tracking operation is changed (Fig. 5; control means such as a tracking servo is moved forward so that it can access the dense and coarse marks).

6. Claims 14 and 15 have limitations similar to those treated in the above rejection as in Claim 1, and are met by the reference as discussed above. Claims 14 and 15 however also recite the following limitation which is also taught by the prior art of Toda:

(a) with respect to Claims 14 and 15, the changed content of the control operation for the position control means is a stop or a start of a tracking offset amount carried out by the position control means (Fig. 5; control means such as a tracking servo is moved forward so that it can access the dense and coarse marks).

7. Claim 16 has limitations similar to those treated in the above rejection as in Claims 1 and 6, and are met by the reference as discussed above.

Allowable Subject Matter

8. Claims 17-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an Examiner's statement of reasons for the indication of allowable subject matter:
As in claim 17, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking-offset amount, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length

than a run-length rule of the conversion means is used as the test information.

As in claim 18, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking polarity, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 19, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking operation, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks, wherein in a

case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 20, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: vibration means which vibrates the reading means in a direction perpendicular to a main scanning direction on the recording medium; wherein the changed content of the control operation for the position control means is a stop or a start of a target track, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 21, the prior art of record fails to teach or fairly suggest an information recording apparatus having the

following features: the changed content of the control operation for the position control means is a stop or a start of a tracking-offset amount, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on every track, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 22, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking polarity, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on every track; wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length

than a run-length rule of the conversion means is used as the test information.

As in claim 23, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking operation, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on every track; wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 24, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: vibration means which vibrates the reading means in a direction perpendicular to a main scanning direction on the recording medium; wherein the changed content of the control operation for the position control means is a stop or a start of a target track, indicated by the position control means in a case where the test information is supplied

to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on every track, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 25, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking-offset amount, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks, wherein the changed content of the control operation for the position control means is a target track indicated by the position control means, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 26, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking polarity, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks, wherein the changed content of the control operation for the position control means is a target track indicated by the position control means, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 27, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking operation, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks, wherein the

changed content of the control operation for the position control means is a target track indicated by the position control means, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 28, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: vibration means which vibrates the reading means in a direction perpendicular to a main scanning direction on the recording medium; wherein the changed content of the control operation for the position control means is a stop or a start of a target track, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks, wherein the changed content of the control operation for the position control means is a target track indicated by the position control means, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test

information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 29, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking-offset amount, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on every track, wherein the changed content of the control operation for the position control means is a target track indicated by the position control means, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 30, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking priority, indicated by the position control means in a case where the test information is supplied to the

drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on every track, wherein the changed content of the control operation for the position control means is a target track indicated by the position control means, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 31, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: the changed content of the control operation for the position control means is a stop or a start of a tracking operation, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on every track, wherein the changed content of the control operation for the position control means is a target track indicated by the position control means, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information

containing a longer run-length than a run-length rule of the conversion means is used as the test information.

As in claim 32, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features: vibration means which vibrates the reading means in a direction perpendicular to a main scanning direction on the recording medium; wherein the changed content of the control operation for the position control means is a stop or a start of a target track, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on every track, wherein the changed content of the control operation for the position control means is a target track indicated by the position control means, wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used, wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action

11. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington, can be reached on (571) 272-4483.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

Kim-Kwok CHU
Examiner AU2627
April 10, 2007
(571) 272-7585

ANDREA WELLINGTON
SUPERVISORY PATENT EXAMINER